

Medals and Awards

National Awards

Logan Medal Margot McMechan

The Logan Medal, the highest award of the Geological Association of Canada, is presented to an individual for sustained distinguished achievement in Canadian earth science. The 2020 Logan Medal is awarded to **Dr. Margot McMechan**, Geological Survey of Canada, Calgary, for an outstanding career of geological mapping and syntheses representing fundamental advances to understanding the tectonic evolution of the Canadian Cordillera and the Western Canada Sedimentary Basin, and their implications for hydrocarbon and mineral exploration.

Citation: Dr. Margot McMechan is an outstanding nominee for the Logan Medal. She has been an exceptional researcher throughout her 38 years with the Geological Survey of Canada. As an expert in mapping, and structural geology, working in areas across the breadth of the Cordilleran Orogen, Dr. McMechan has published well over 100 titles, including nearly 60 geological maps and over 40 comprehensive papers in leading peer-reviewed journals.

Her publications have provided rigorously documented and insightful interpretations, representing fundamental advances to our understanding of the tectonic history of the Canadian Cordillera and the Western Canada Sedimentary Basin, and their implications for hydrocarbon and mineral exploration and development. Her dedication and attention to detail are legendary. This is particularly remarkable because her detailed



mapping includes some of the most rugged and challenging terrain in the Canadian Rocky Mountains. Unsurprisingly, Dr. McMechan's work is highly respected among geoscientists in western Canada's petroleum and mining sectors.

This ongoing excellence has been recognized through the prestigious R. J. W. Douglas Medal (2007) from the Canadian Society of Petroleum Geologists (CSPG); the CSPG Best Ph.D. thesis award (1980), and the CSPG 1985 Medal of Merit for most significant paper dealing with Canadian petroleum geology and, recently, the 2012 Best Paper award from the *Canadian Journal of Earth Sciences*, among others.

Of particular impact for the petroleum exploration industry were studies on patterns of thermal evolution, and lateral variations in structural style in the Alberta foothills. Her mapping and compilation in the Rocky Mountains of British Columbia and Alberta helped elucidate structural controls on the contained coal resources. Also, her studies of

Cont'd on p. 4

GEOLOGICAL ASSOCIATION OF CANADA

The MISSION of the Geological Association of Canada is to facilitate the scientific well-being and professional development of its members, the learned discussion of geoscience in Canada, and the advancement, dissemination and wise use of geoscience in public, professional and academic life. The VISION of the GAC® is to be a multidisciplinary scientific society supportive of the entire scope of the geosciences in Canada. The GAC® aims to be a geoscience community that is knowledgeable, professionally competent and respected, whose input and advice is relevant, widely sought and utilized, and whose vital contribution to the economic prosperity and social well-being of the nation is widely acknowledged.

La MISSION de l'Association géologique du Canada est d'aider au développement scientifique et professionnel de ses membres, de favoriser les échanges géoscientifiques au Canada ainsi que de promouvoir et de diffuser l'utilisation éclairée des géosciences dans un contexte public, professionnel et académique. La VISION de l'AGC® est de faire connaître une communauté géoscientifique de grand savoir, dont les compétences professionnelles sont respectées, dont les suggestions et les avis sont pertinents, recherchés et utiles, et dont la contribution largement reconnue est considérée comme vitale pour la prospérité économique et le bien-être de la nation.

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National Awards / Prix nationaux

Logan Medal

W. W. Hutchison Medal

E. R. Ward Neale Medal

J. Willis Ambrose Medal

Eric Mountjoy Exchange Award

Student Awards / Prix étudiants

Mary-Claire Ward Geoscience Award

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Canadian Geomorphology Research Group—

J. Ross Mackay Award, Olav Slaymaker Awards

Geophysics Division—

Geophysics Division Student Award

Canadian Sedimentology Research Group—

Middleton Medal

Marine Geosciences Division—

Michael J. Keen Medal

Mineral Deposits Division—

Duncan R. Derry Medal, William Harvey Gross Award,

Julian Boldy Certificate Awards

Paleontology Division—

Elkanah Billings Medal, Pikaia Award

Precambrian Division / Mineral Deposits Division —

Howard Street Robinson Medal

Canadian Tectonics Group—

Jack Henderson Prize for Best Thesis, Ph.D. and M.Sc.

Volcanology and Igneous Petrology Division—

Career Achievement Award, Léopold Gélinas Medal

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GEOLOG (ISSN 0227-3713; 1712-3747) est le bulletin trimestriel de l'Association Géologique du Canada, à St. Jean, Terre-Neuve-et-Labrador. *GEOLOG* s'adresse aux membres de l'AGC® et son contenu reflète le caractère polyvalent de cette organisation. Nous invitons la soumission de nouvelles et articles courts pouvant intéresser les membres, incluant les thèmes de sensibilisation du public aux sciences de la Terre. Les articles suscitant des échanges d'opinions et d'informations entre les secteurs académique, industriel et gouvernementaux sont également la bienvenue. *GEOLOG* accepte et publie les articles dans les deux langues officielles du Canada. Les idées sont celles des auteurs et ne représentent pas nécessairement la position officielle de l'AGC®. *GEOLOG* n'est qu'un des nombreux forums offerts par l'AGC® aux scientifiques à travers le monde.

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Contents / Table des matières

Medals and Awards	1, 4
Reading on the Rocks.....	15
Milestones, Memories and Tributes.....	16
Announcements.....	17

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Contributions for next issue

Please send items for the next issue of *GEOLOG* by e-mail to Alwynne.Beaudoin@gov.ab.ca on or before **September 1 2020**

UNESCO Global Geopark designation for the "Cliffs of Fundy", Nova Scotia

In July 2020, a long stretch of coastline in Nova Scotia was designated a Global Geopark, a recognition of sites and landscapes of international geological significance. The new Geopark stretches for 165 km along the north shore of the Minas Basin, from Apple River in the west to Lower Truro in the east. The Geopark encompasses thirty geosites and spectacular coastal scenery. Find out more at <https://fundygeopark.ca/>



Source: GAC® Facebook page

Cont'd from p. 1

basement structures in southeastern British Columbia led her to provide insights on how these features may have controlled the localization of subsequent SEDEX, VMS, and carbonatite mineralization.

Further, she exemplifies the ideals of scientific research by consistently demonstrating integrity, humility, and a willingness to consider the ideas of others. Dr. McMechan has trained dozens of student assistants in field methods, and is widely recognized as a role model, a mentor, and an advocate for women entering the Earth Sciences. Her mentorship was recognized in 2000 by the Alberta Women's Science Network as "Mentor of the Millennium" and in 1994 she was on the Alberta Premier's Council list for Alberta Women in Science and Technology. In addition, her constant good humour, positive attitude, praise and support to those around her provide ongoing inspiration to students and colleagues alike.

J. Willis Ambrose Medal Joseph Hodych

The Ambrose medal, named after the first GAC® President, J. Willis Ambrose, is awarded to an individual for sustained dedicated service to the Canadian earth science community. **Dr. Joe Hodych** is awarded the J. Willis Ambrose Medal for his sustained and dedicated service



to the Canadian Earth sciences community through his research on paleomagnetism and paleomagnetic rock properties, his commitment to the promotion of Earth sciences *via* his unwavering support of GAC® and GAC®-NL, and, above all, his spirited mentorship as an inspirational educator.

Citation: Joe Hodych is nominated for the J. Willis Ambrose Medal for his sustained and dedicated service to the Canadian Earth sciences community through his research on paleomagnetism and paleomagnetic rock properties, his commitment to the promotion of Earth sciences *via* his unwavering support of GAC® and GAC®-NL, and, above all, his decades of mentorship as an

inspirational educator. He is a modest man who commands our respect, due not only to his breadth of knowledge and unique ability to convey complex concepts so that they are tractable to all, but also, and importantly, owing to his respectful demeanor: Joe treats everyone fairly and well.

Having (formally) retired 13 years ago, Joe continues to supervise students and to attend, and present, seminars and lectures at the University (Memorial University of Newfoundland and Labrador; MUN), at our Provincial Geological Survey, and at GAC® national and GAC®-NL functions. He also continues to manage and maintain one of the few remaining paleomagnetism laboratories in Canada. Joe's most significant scientific contributions have been toward the understanding of the paleomagnetic properties of rocks, which remain critical to the plate tectonic paradigm. Locally, Joe is considered an unsung hero of Earth sciences, as he does not trumpet his own research, nor any of his successes.

Joe's outstanding service to the Canadian geoscience community has been particularly beneficial to the local community, especially to the Newfoundland and Labrador Section of GAC®. Together with his students, Joe has helped, attended and presented at most, if not all, of the annual Section meetings. As a researcher in paleomagnetism, he has always recognized the importance of understanding the field context of his samples: to this end he has been omnipresent at the Section's annual fall field trips. In addition, Joe is a welcome performer at the Section's social gatherings, for example, as a suitably-attired (tuxedo-clad) sommelier at the wine tastings. Joe has also assisted with the organization of several GAC® Annual Meetings held in St. John's.

Joe's main contribution, however, is as an educator. Joe has supervised no less than six graduate students since his retirement in 2005, and countless more throughout his long career as a Professor of Geophysics at MUN. Joe continues to mentor and supervise graduate and undergraduate students. In the classroom, Joe is dynamic, animated, often comedic, and his quirky demonstrations never fail to add clarity, as well as humour, to the concepts that he so brilliantly conveys. From the perspective of MUN (Earth Sciences) alumni, Joe is one of our most admired and respected professors who has, through his decades of dedicated service, inspired so many young (and not-so-young) minds.

W. W. Hutchison Medal Shahin Dashtgard

The W. W. Hutchison Medal is named after Dr. William W. Hutchison in recognition of his many contributions to the Geological Association of Canada and to Canadian and international geoscience. The medal is awarded to a young individual for recent



exceptional advances in Canadian earth science research. The 2020 medal is awarded to **Dr. Shahin Exton Dashtgard** for innovative integration of modern and ancient geological datasets towards better interpreting the sedimentary rock record.

Citation: The 2020 W. W. Hutchison Medal is awarded to Dr. Shahin Exton Dashtgard, Professor at Simon Fraser University, for outstanding contributions to Canadian Earth Science Research. After receiving B.Sc. Honours (Alberta 1998) Shahin worked for three years as a Professional Geologist in Alberta. Following the completion of his Ph.D. (Alberta 2006), Dr. Dashtgard worked with the Alberta Geological Society and then he accepted a position at Simon Fraser University. In the 11 years since receiving his Ph.D., Dr. Dashtgard has amassed an amazing record of published research and student training, including having published 55 peer reviewed papers and book chapters, trained 25 graduate students, and trained many undergraduate students and industry professionals. Shahin's research is field-based, uses complimentary sedimentological datasets, such as ichnology and palynology, and has made significant contributions to our understanding in a wide range of areas, including: (1) The integration of Ichnology and Palynology towards interpreting and understanding fluvio-tidal settings in the rock record. This work has focused on actualistic studies on the Fraser River and the application of that dataset to the rock record; (2) The recognition of tidal shorefaces in the rock record, a body of work that established sedimentological and classification criteria that could be used to determine tidal ranges on clastic shorefaces; and, (3) Applications of neoichnology for which Shahin has produced papers using modern trace distributions to interpret trace fossils in the rock record,

including the influence of grain size on the preservation of bioturbation, distribution of bioturbation related to the organic matter concentration, and various invertebrate responses to wave energy. Dr. Dashtgard's achievements have been previously recognized with the James E. Wilson Award (Excellence in Young Researchers) from the Society for Sedimentary Geology and as a CSPG Distinguished Lecturer. In addition to his excellent research, Dr. Dashtgard teaches numerous courses at the undergraduate and graduate level, and serving in a range of capacities on university and conference committees. Dr. Dashtgard is one of the top young geologists in the world and a worthy recipient of the W. W. Hutchison Medal.

Eric Mountjoy Exchange Award

The Eric Mountjoy Award is intended to encourage the exchange of young geoscientists between Québec and other parts of Canada. The award is named after Eric Mountjoy, a distinguished Canadian professor of geology at McGill University, explorer, Fellow of the Royal Society of Canada, and recipient of the Douglas Medal of the Canadian Society of



Petroleum Geologists and the Pettijohn Medal of the Society for Sedimentary Geology. He was renowned for his contributions to the understanding of sedimentary carbonate rocks, particularly those of Devonian age, in his pioneering geological explorations and geological maps and cross-sections of the Canadian Rockies, particularly in the region of Jasper National Park and Mount Robson Provincial Park. The 2020 award goes to **Chimira Andres** from Western University. Chimira will be using her award to enhance her M.Sc. research by collaborating with Université de Montréal to characterize the physical and thermal properties of permafrost samples collected from Axel Heiberg Island in the Canadian High Arctic, using specialized equipment housed in the GeoCryoLab. The study will provide insight into periglacial processes and their analogues for planetary studies, as well as provide insights into hazard analysis and freshwater resources for communities in High Arctic regions.

Sections and Divisions Awards

Canadian Tectonics Group Dave Elliott Best Paper Award

This award is presented each year to recognize an exceptional publication in the fields of tectonics and/or structural geology by a researcher at a Canadian institution (lead author) or investigating a Canadian field area. The 2020 award goes to **Pascal Audet** (University of Ottawa), **Claire A. Currie** (University of Alberta), **Andrew J. Shaeffer** (University of Ottawa, now at GSC Pacific) and **Alexander M. Hill** (University of Ottawa) for their paper "Seismic evidence for lithospheric thinning and heat in the northern Canadian Cordillera", published in *Geophysical Research Letters* 46(8): 4249-4257, 2019. The paper can be found here: <https://doi.org/10.1029/2019GL082406>.

Citation: This study by Audet *et al.* provides a multi-faceted approach to investigate the origin of the lithospheric mantle beneath the northern Cordillera. The authors seamlessly integrate geophysical data with thermal modelling and geological observations to test hypotheses of the age and origin of the very thin lithosphere beneath the northern Canadian Cordillera. The paper is well-written, succinct and is accessible to non-specialists.

Honorable mentions:

Sean Kelly, Christopher Beaumont and Jared P. Butler for their paper "Inherited terrane properties explain enigmatic post-collisional Himalayan-Tibetan evolution", published in *Geology* 48(1): 8-14, 2020. <https://doi.org/10.1130/G46701.1>.

Noah John Phillips, Christie D. Rowe and Kohtaro Ujiie, for their paper "For how long are pseudotachylytes strong? Rapid alteration of basalt-hosted pseudotachylytes from a shallow subduction complex", published in *Earth and Planetary Science Letters* 518: 108-115. <https://doi.org/10.1016/j.epsl.2019.04.033>

Jack Henderson Prize for Best Ph.D. thesis

The 2020 award is given to **Eric Thiessen**, Simon Fraser University, for his thesis "Paleoproterozoic tectonometamorphic evolution of the southeastern Rae craton margin", supervised by Dan Gibson.

Jack Henderson Prize for Best M.Sc. thesis

The 2020 award is given to **Michael Duvall**, University of Alberta, for his thesis "Subsurface structural variability of the Himalayan foreland basin, Nepal", supervised by John Waldron.

Mineral Deposits Division Duncan Derry Medallist

The Duncan R. Derry Medal is the highest award bestowed by the Mineral Deposits Division (MDD). It is awarded annually to an outstanding economic geologist who has made significant contributions to the science of economic geology in Canada. The 2020 award is given to **Dr. Sarah-Jane Barnes**, Université du Québec à Chicoutimi.



Citation: Professor Sarah-Jane Barnes is simply the most renowned researcher on Platinum Group Elements deposits and their associated intrusions in the world. This recognition is the outcome of a career of detailed and careful documentation of the geological, mineralogical, and geochemical features of the PGE deposits worldwide, supported by development of state-of-the-art analytical techniques, including INAA and LA-ICP-MS, that have set unsurpassed analytical benchmarks. Her work encompasses a large body of highly cited contributions, including her seminal 1985 paper on the fractionation of PGE in magmatic deposits that remains the most authoritative reference on the subject. This was accomplished training more than 70 students at all levels from B.S. trainees to post-doctoral fellows, several of whom are now leading researchers in their fields. Professor Barnes's research has a wide breadth tracking the detailed aspects of PGE partitioning between minerals and magmas and its profound economic implications for precious metal recovery. Her work tracking Platinum Group Minerals has led to exciting understanding of less well-known elements Te, As, Bi, Sb, Se, also now known as TABS. The excellence of her research was recognized by the award of the Tier 1 Canada Research Chair in Magmatic Metallogeny, the only Canada Research Chair in mineral deposit geology in Canada during her tenure.

Acceptance: I am honoured by the award of the Duncan Derry medal for 2020 from the Mineral Deposits Division of the Geological Association of Canada. I confess that in this time of pandemic, I have struggled to find the right note in writing acceptance remarks, as it seems hardly the time for celebration. However, upon reflection I have concluded it is time for the famous "Keep calm and carry on". So, I write this in that spirit.

No-one reaches the stage of receiving a medal simply by their own efforts alone, thus an acceptance remarks/speech must consist of acknowledgements of those who either pointed the way or supported one along the way. First, I would like to thank those who arranged my nomination and wrote letters of support. For a nomination to be successful, those supporting the candidate must themselves be successful and thus they are busy people, who give up their time for no particular gain of their own, which requires some sacrifice on their part. Writing a letter of support is an art in and of itself. The selection committee is always faced with a number of good candidates with little to choose between them. The letters of support must not only say that the nominee is worthy of the award, but also provide some interesting detail to make them stand out (hopefully positively) from the others. I should also here thank MDD and its committees for promoting mineral deposits studies in Canada and encouraging students to study mineral deposits through their fieldtrip program.

I have been fortunate in being able to study ore deposits using a fundamental approach for most of my career. As is the case with most geologists I came to study geology and my specialty more by good luck than good judgment. As an undergraduate in South Africa in the early 1970s I was training to be a science teacher. Teacher, nurse or secretary being areas deemed suitable for a woman at that time. I registered for first year geology in the hope of obtaining a bursary from the mining industry. It was only later that I realized that they did not fund or employ women. Compared with the staid professors of chemistry, physics and mathematics, the geologists were an unconventional bunch. Suits and ties were obligatory for lecturers, but in contrast to the other lecturers who wore elegant suits or at least ones that fitted and had matching ties, the geologists did not seem to care how out of date or baggy their suits were. What marked them out was their enthusiasm for their topic, whether it was

mineralogy or paleontology, and their willingness to talk to students on field trips as though we were real people. This and the idea of the adventure of fieldwork seduced me into studying geology at the time and place where women were not expected to have a career in geology. Whereas not all the lecturers were supportive, I must thank them all for conveying their passion for geology and in particular thank those who encouraged me to continue my studies (Professor Clifford and Dr. Ferguson).

After graduation, I was sent to the Geological Survey's Namibia branch. As the only female geologist I caused quite a few logistical headaches. At twenty-one years old I was also supremely indifferent to the clash of cultures as represented by some of the older conservative geologists and my feminist approach to life. I must thank my immediate boss of the time (Dr. Roy Miller) for his patience with this and his assistance in finding and funding an M.Sc. project for me.

I wrote up the M.Sc. project at the University of Cape Town. At the time the popular topics at the university were meteorites, lunar samples and the flood basalts of the Karoo. A project from the geological survey looking at serpentinites from the Damara mobile belt was considered by the geochemist as not worth bothering with. I must thank the then head of the department (Prof. Arch Reid) for rescuing me and the newly hired lecturer (Dr. Dave Waters) for accepting to supervise my thesis.

From the Namibia to Canada, to do a Ph.D. with Prof. Tony Naldrett. This was once again a big change in culture. I had been almost completely independent during my M.Sc. research and adapting to the Canadian approach of directed research took a little getting used to. I must thank Prof. Mark Gorton for his guidance during this period. At one point in my Ph.D. I was objecting to having to write a report for the granting authority (right now I cannot think why I did not think it was my job to do this). Naldrett looked at me, pulled in his chin the way he always did when he wanted to make a point and said "Sarah, you must understand, you are now part of Naldrett INC, and as such must contribute to the running of things". Having now run large teams myself, I now understand this and I have come to realize that being part of Naldrett INC has opened doors for me and given opportunities that training with other professors would not have. I must thank Prof. Naldrett for this.

The Naldrett connection brought me to my postdoctoral position in Norway which allowed me to study a layered intrusion in detail. In addition, I was given complete freedom and this allowed me to develop some of the ideas (using metal ratios for example) that have been the mainstay of my career. I must thank Dr. Ron Boyd for arranging the project and Are Korneliussen for teaching us how to make Norwegian style coffee and how to ski Norwegian style.

My career as a university professor would not have been possible without the financial support of a number of Canadian institutions that allowed research to be carried out in the spirit of pure curiosity. My first university post at the Université du Québec à Chicoutimi was as part of a team of young researchers supported research council of Québec (FQRNT), with the purpose of supporting the newly opened doctorate program and to study ore deposits in the Precambrian of Québec. This position was funded for seven years and only required half-time teaching and the rest of the time being devoted to research. I must thank Professor Guha for managing the project and other members of the Sciences de la Terre for welcoming us into the department. Of course time alone is not enough, funds to carry out research are necessary and here the NSERC Discovery Grants were crucial. This continual funding throughout my career together with the Canadian Research Chair funding in the last 14 years has been critical in allowing me to develop my research in a creative manner. These grants have no specific requirements other than papers and students should be produced broadly in the domain of one's expertise. Unfortunately, neither the Discovery Grant program nor the CRC have kept pace with inflation and any increase the research councils had have has been directed to more targeted research. I would urge those who have influence on these decisions to rethink this approach.

Before leaving the topic of institutional support I should thank my home university for allowing me to develop my research laboratory (LabMaTer) and allocating some of the much prized Canadian Fund for Innovation funds to our laboratory. This has allowed my laboratory staff and I to focus on developing analytical techniques for ore deposit materials which are often neglected in conventional geochemistry laboratories and here I must thank in particular two of my laboratory staff Dr. Paul Bédard and Mr. Dany Savard.

Every professor is aware that they would have achieved

much less without students and post-doctorate fellows. Students, especially undergraduate students, play a vital role in training one to communicate clearly. Students and post-doctorates are also essential to carry out much of the research, grapple with whatever new format journals want and provide energy and enthusiasm when one's own is flagging. They have the sometimes irritating habit of asking fundamental questions. As a professor when I found myself about to answer "Evidently... Obviously... It is well known that...", it was a signal that this answer is either not evident or something I do not understand. In either case, some research or reading was required. I must thank the students for keeping me on my toes and opening new avenues of research.

Finally I must thank my husband (Prof. Ed Sawyer) of 42 years and son for keeping me grounded when I got too full of myself and support when I was discouraged usually with a few chosen words, but often with a simple silence and raised eyebrow.

William Harvey Gross Award

The William Harvey Gross Award is bestowed annually by the Mineral Deposits Division to a geoscientist less than 40 years of age who has made a significant contribution to the field of economic geology in a Canadian context. The



contribution may relate to studies that include all aspects of what is generally referred to as economic geology, and which represents the broad spectrum of fields to which Bill Gross contributed. The 2020 medal is awarded to **Dr. Jean-Luc Pilote**, Geological Survey of Canada.

Citation: Dr. Pilote completed his B.A. (Hons.) from the University of Moncton in 2008, an M.Sc. from Acadia University in 2011, and a Ph.D. from Memorial University in 2018. His M.Sc. research focused on regional mapping and tectonics of plutonic rocks in northern New Brunswick under the supervision of Dr. Sandra Barr and Mr. Reg Wilson of the Geological Survey of New Brunswick, which led to a publication in *Atlantic Geology* in 2012. Following this work, he

completed a multidisciplinary study on the Ming volcanogenic massive sulfide (VMS) deposit in the Baie Verte Peninsula, Newfoundland, which led to four papers in internationally circulated journals that have impacted our understanding of VMS deposits in Newfoundland and the setting and genesis of Au-bearing VMS deposits globally.

Dr. Pilote is an outstanding scientist and person. He has the unique combination of being an outstanding field geologist, but also is adept and careful in the laboratory, such that he can tackle geoscientific problems from orogen- to nanoscale. His research has addressed fundamental issues in Appalachian tectonics and more global issues related to origins of Au-enrichment in volcanogenic massive sulphide (VMS) deposits. He is a first-rate field geologist that utilizes geological mapping and drill core data to undertake volcanic, sedimentary, hydrothermal, and structural reconstructions of both orogen belts and the deposits hosted within them. During his M.Sc. he was involved in Appalachian regional mapping, whereas in his Ph.D. thesis he focused at the deposit scale. However, research from both of these degrees fundamentally impacts his research thought processes as he has the ability to see a relationship on a local scale and utilize these local relationships to understand the broader evolution of an orogen (e.g., using mine-scale petrology and isotopes to understand Cambro-Ordovician Appalachian tectonism). Similarly, he has the ability to use regional geological knowledge to understand processes on a local scale (e.g., deciphering secondary remobilization of gold due to Silurian metamorphism and deformation in the Ming VMS deposits). This ability to think at various scales is very rare in many modern geoscientific researchers and is an exceptionally valuable skill.

Besides his field skills, Dr. Pilote has acquired outstanding skills in the geochemistry, radiogenic isotopic geochemistry, micro-analytical methods (e.g., SEM, EMPA, LA-ICP-MS), quality control and quality assurance (QA/QC), and the statistical treatment and modelling of analytical and petrological data. For example, his work on using scanning electron microscopy-mineral liberation analysis (SEM-MLA) to understand the origins of Au-enrichment in VMS deposits led to a ground-breaking paper in *Economic Geology* that utilized an innovative technique (SEM-MLA) linked to outstanding field and stratigraphic control to solve a fundamental problem in mineral deposits. Similarly, his creative litho-geochemical and petrological modelling work on the

Rambler rhyolites published in *American Journal of Science* illustrated quite convincingly that slab melting was a crucial process for Au-enrichment in the Ming VMS deposits and this has implications for global models of Au-rich VMS deposits. Further, his monitoring of QA/QC of analytical data in our ICP-MS laboratory at Memorial documented a major problem with dissolutions for high-Al samples that was not recognized prior to his work, and this has now completely changed the analytical and QA/QC protocols we use for samples in our laboratories at Memorial. These are examples of his creativity and ability to integrate data at multiple scales, and it illustrates that Dr. Pilote is an exceptional geoscientist with a breadth of skills the from field to the laboratory that is very uncommon.

Dr. Pilote is also a leader and a fantastic person. As a graduate student at Memorial he was always willing to help other graduate students, collaborating extensively with my other students, including publishing a number of papers together, was president of the Student Chapter of the Society of Economic Geologists, and was active in volunteering for various events in the local geoscience community here in St. John's. Further, he was a person I would routinely ask his advice and insight on various research questions. Our relationship was more one of peers than one of a student and supervisor.

Dr. John Pilote is a driven, curious, and articulate researcher that is affable and a team player that is always willing to roll up his sleeves to get things done and contribute to any group he works with. He has great potential and will become a world-class researcher in economic geology. Further, despite being early in his career, his work has already been a "significant contribution to the field of economic geology in a Canadian context" and thus he is a very suitable candidate for the William Harvey Gross Medal.

Acceptance: It is a great pleasure and honour to be receiving the 2020 W. H. Gross Medal. I know that Dr. William Gross was respected worldwide for his achievements in the search for and development of mineral resources and it is with sincere gratitude that I accept this award established in recognition of his contributions to the field of economic geology.

I consider myself very lucky. When I was a freshman in geography at the Université de Moncton, a field trip to Gros Morne National Park in Newfoundland in late

August 2006 included a stop at the foot of the Tablelands. I did not know much about geology but reading the information sign in the parking lot – meant for grazing tourists slowly making their way to or out of Trout River – and learning that the landscape in front of us involved the obduction of an oceanic crust was all it needed for me to be hooked on geology. It is hard to avoid the clichés but since that exact moment, little did I know that my choice for taking this path would lead me to work and be mentored by incredible geologists.

I am indebted to many people, beginning with Mike Parkhill (NB Survey) for helping me making my way to Acadia University to work with Dr. Sandra Barr on a M.Sc. project in northern NB; to Reg Wilson for shaping my young geology career in the field (I will never forget my first day bushwhacking down the Jacquet River valley) and to Dr. Cees van Staal (GSC – retired) for fueling my interest for tectonic processes. After my master's degree, I decided to take a year working in the industry. I knew a Ph.D. was in the plan but a year working in exploration had been strongly encouraged by my entourage, including Sandra. This is something I certainly do not regret. I was employed a full year by Alto Ventures, a junior exploration company based in Sudbury, with projects in eastern Abitibi, around Oxford Lake (northern Manitoba), and north of the Beardmore-Geraldton belt in northwestern Ontario. The president and CEO of Alto Ventures, Mike Koziol, quickly saw the passion I had for this type of work and gave me many responsibilities knowing that some mistakes would not be avoidable. I absorbed everything I could, anticipating that this experience would help me down the road.

Coincidentally, my Ph.D. brought me back to Newfoundland, where I worked under the supervision of Dr. Steve Piercey (MUN). The project involved “taking apart” the Rambler Metals and Mining's Ming VMS deposit in the Baie Verte Peninsula (not too far from my dear Tablelands). Peter Mercer (GM) and Larry Pilgrim (former Rambler's Senior Geologist) gave me green light to access everything I needed to successfully achieve the goals of this project. They trusted me and my methods and never once have they made me feel my presence or requests of all kinds (e.g., access to underground workings and drill core, data, samples) were a burden. This freedom was extremely beneficial for me and for them because it gave me the opportunity to test numerous hypotheses and in return provided them crucial exploration insights. During my time at MUN,

working with Steve helped me grow as person, as a geologist, and even more as a researcher. We share similar research interests and many conversations led to interesting ideas we knew we had to pursue. We continue to collaborate and I hope we do so for many more years.

I made my way to the Geological Survey of Canada in January of 2018 where a TGI-related post-doctoral project had been designed around the question of gold enrichment in sedimentary pyrite in the Timmins area and its implications to auriferous ore systems. This led me to work closely with Patrick Mercier-Langevin, Benoît Dubé, Simon Jackson, and other fantastic researchers from the GSC. I could not ask for better people to work with while starting this career in research. Now permanent at the GSC beginning this April, I am very excited for the future and could not be happier to call them colleagues.

I want to thank all the mentors I was lucky to have, opportunities that were given to me, and guidance during not-so-clear moments. I want to thank especially those who wrote the nomination for this award: Drs. Steve Piercey, Patrick Mercier-Langevin, and Benoît Dubé. Also, a warm thank you to those who wrote letters in support of this nomination: Dr. Greg Dunning (MUN), Dr. John Hinchey (NL Survey), Dr. Sandra Barr (Acadia University), Peter Mercer (Rambler) and Reg Wilson (NB Survey – retired). Your words are very kind.

Finally, thank you to the Mineral Deposits Division of the Geological Association of Canada for this award.

Again, I consider myself very lucky.

Volcanology and Igneous Petrology Division Career Achievement Award

The Career Achievement Award is made by the Volcanology and Igneous Petrology Division of the Geological Association of Canada in recognition of career achievements in the field of volcanology and/or igneous petrology. The 2020 award is given to **Dr. John Greenough**, UBC-Okanagan, for his lifetime scientific contribution to the fields of Volcanology and Igneous Petrology.

Citation: We are pleased to nominate Dr. John Greenough for the Career Achievement Award offered by the Volcanology and Igneous Petrology Division of the GAC®. John has conducted research centered on the fields of volcanology, igneous petrology and geochemistry for 37 years. This corpus of work is breathtaking in its breadth and quality. His early work, initiated during his Ph.D. research at Memorial University of Newfoundland, focused on the geochemistry of mafic volcanic rocks in Atlantic Canada. He didn't restrict himself to establishing traditional petro-tectonic models for the genesis and significance of these rocks, but focused on novel aspects of their geochemistry, notably the role of volatiles on differentiation, the effects of assimilation on their isotopic signatures, emplacement mechanisms and flow direction indicators, and PGE content. He was the first to under-take dating of baddeleyite (Zr oxide), now routinely used to determine the age of mafic rocks lacking zircon.

John didn't restrict himself to investigating mafic igneous bodies, but also worked on suites of xenoliths that occur in some, notably fragments of gneissic rocks in lamprophyres in Nova Scotia that he postulated represented the basement to the Meguma terrane. This inference has since been confirmed by the O isotopic composition of granitoid rocks in southern mainland Nova Scotia. Not surprisingly given his interest in mafic rocks, John has contributed to our understanding of the mantle sources of various types of basalt, notably OIB.

A decade after completing his Ph.D. studies, John extended his research program to include a variety of other media besides rocks. After setting up an Earth Sciences program at Okanagan University College (now UBC-Okanagan), in the centre of British Columbia's wine country, John tackled the complex problem of establishing geochemical signatures for different types of wine, as a means of confirming provenance and therefore authenticity on the one hand, and flagging those containing, or wholly consisting of, wines not produced from sources of grapes as indicated on the labels. This required him to master exploratory statistics, notably multi-dimensional scaling, an approach that he subsequently applied to petrological studies as well as lithic and ceramic archaeological ceramics and even maple syrup! John has continued an active and influential research program, mentoring large numbers of thesis students while his Department at UBC-Okanagan grew, despite having heavy

administrative responsibilities. He brokered and set up the Fipke Lab, which continues to expand in the range of data that it provides, including most recently (autumn 2019), Pb isotopic ratios of feldspars in granitoid rocks. He also served two terms as Editor-in-Chief of *Canadian Journal of Earth Sciences*. He has published over 100 papers in refereed journals, mostly as first author. This include many tier one periodicals (e.g., *Journal of Petrology*, *Contributions to Mineralogy and Petrology*, *Lithos*, *Geochimica et Cosmochimica Acta*, among others). We conclude that Dr. John D. Greenough is most worthy of being awarded the GAC®'s Career Achievement Award.



Jarda Dostal and J. Victor Owen
Department of Geology, St. Mary's University
Halifax, Nova Scotia

Acceptance: Considering the stellar international stature of past recipients, it is amazing to be the 2020 recipient of the GAC®'s Volcanology and Igneous Petrology (VIP) division Career Achievement Award. I express appreciation to my nominators and to the VIP for this great honour. Whatever I accomplished over the course of my career, nothing would have been possible without the help and support of more people – relatives, colleagues and friends – than I can name here. Collectively, their names would fill an issue of *Ashfall*, so here is a “short list”; I apologize for those omitted. First and foremost, I thank my parents, Russel and Adelaide, who instilled in me a love of science and gave me a fabulous education. My sister Helen, and her husband John, have been my mental “rock” and they housed and fed me for 35 years when I was in Halifax doing research.

Inspirational professors include Harold Nathan and Sandra Barr (undergraduate), Keith Bell (M.Sc.) and Steve Papezik, Brian Fryer and Henry Longerich (Ph.D.). Henry encouraged my discovery of exploratory statistics (multidimensional scaling) and co-authored the first research papers on agrifood biogeochemistry. The many lithic, geochemical-archaeology papers with

Leanne Mallory are amongst my most-cited and they helped develop data preparation methods for using exploratory statistics in petrology. Brian Fryer's Memorial and University of Windsor groups graciously gave access to world-changing ICP-MS analytical techniques that yielded novel papers on OIB PGE geochemistry, agrifood biogeochemistry, geochemical archaeology, and gold trace element geochemistry. Tom Krogh and Sandra Kamo (University of Toronto) collaborations led to the first terrestrial baddeleyite date and the discovery of perhaps the largest layered mafic intrusion (Suwar) in 50 years. Work with Jarda Dostal sparked a fascination with mantle component geochemistry/evolution that has been the focus of my research for twenty years. The work also enabled dabbling in planetary geology.

There have been many B.Sc. honors and graduate student M.Sc. publications but Mikkel Tetland's ground-breaking work on a gold reference standard stands out. Saving one of the best for last, I owe Victor Owen a debt of gratitude because I published more journal papers (igneous and metamorphic petrology, geochemical archaeology) with him than with anyone else. *Circa* 1990, Murray Roed invited me to help write and/or edit the best-selling books on the geology of the Okanagan Valley. These have generated a \$100,000.00 scholarship endowment and garnered him the GAC's E. R. Ward Neale Medal.

Throughout the Okanagan, there are teachers, naturalists, rock hounds and professional geoscientists, who know of me from these books. I am perhaps most proud of the group effort with Jeff Curtis, Ian Walker and Yuan Chen that created the OUC Earth and Environmental Sciences Department, and ultimately a B.Sc. degree program, during a time when "geology" was not a popular word. Astrid Blodgett was the Editorial Assistant god-send who enabled my thirteen year stint as Associate Editor, and ultimately Editor, of *CJES*.

Fortuitously, in 1990, I met my friend Charles Fipke, the greatest Canadian exploration geologist of our time. His vision in 2003 allowed us to design and build the Fipke Laboratory for Trace Element Research (FILTER) with support from UBC-Okanagan. Critically, in recent years, Kyle Larson supplied a raft of graduate students and gave the lab new initiative. The brilliant technical expertise of Burt Mueller and David Arkinstal set up and productively-operated the multi-instrument lab, and

today Mark Button and Sudip Shrestha are making it jump. All these wonderful friends, their families, and my dear friends the Bakers, helped in another way; they enriched the life of my precious 15-year old daughter, Catherine, as we brought her along on the thrilling geoscience joy ride. I am proud that one of her earliest words was "salt" which she remembered for 4+ months after hearing it because basalt is Daddie's favorite rock.

To summarize, I express my heartfelt appreciation to VIP for this prestigious award and thank the collaborators, students, friends and family members who helped give me this rewarding life and career.

Leopold Gélinas Medal

The Volcanology and Igneous Petrology Division of the Geological Association of Canada annually presents three medals for the most outstanding theses, written by Canadians or submitted to Canadian universities, which comprise material at least 50% related to volcanology and igneous petrology. A gold (plated) medal is awarded for the best Ph.D. thesis, a silver medal for the best M.Sc. thesis and an antique copper medal for the best B.Sc. thesis. Theses are evaluated on the basis of originality, validity of concepts, organization and presentation of data, understanding of volcanology, and depth of research.

Gélinas Award (Gold, Best Ph.D. Thesis)

Awarded to **Alex Wilson**, University of British Columbia, for "Glaciovolcanism in the Garibaldi volcanic belt", supervised by James K. Russell.



Gélinas Award (Silver, Best M.Sc. Thesis)

Awarded to **June Cho**, University of British Columbia, for "A microanalytical investigation of feldspars in the Skaergaard intrusion, East Greenland: Ternary feldspar compositional relations and lead isotopic geochemistry", co-supervised by James S. Scoates and Dominique Weis.



Gélinas Award (Bronze, Best B.Sc. Thesis)

Awarded to **Shae Nickerson**, St. Francis Xavier University, for “The mineralogy and petrogenesis of rare-element granitic pegmatites in northeastern Nova Scotia”, supervised by Donnelly Archibald.



winning thesis. The award is administered by the Geological Association of Canada (GAC®), the Prospectors & Developers Association of Canada (PDAC), the National Geological Surveys Committee, the Canadian Geological Foundation, and Watts, Griffis and McOuat Ltd.

The 2020 award is given to **Kendra Zammit**, M.Sc. student at Laurentian University.

Kendra's M.Sc. research seeks to constrain the Neoproterozoic evolution of progressive deformation and orogenic gold mineralizing events in the western Wabigoon sub-province of Canada's Superior Province. Her research integrates legacy data, new field observations, micro-structural analyses, and U-Pb geochronology to revise the structural and metallogenic evolutionary history of the region. Results will document the influence of structural evolution of greenstone belts on their differential gold endowment, and will assist future orogenic gold exploration in the western Superior Province.



Student Awards

Mary-Claire Ward Geoscience Award

The award is given annually and honours the memory of Mary-Claire Ward who died in 2004. At the time of her death Mrs. Ward was the chair of the PDAC's geoscience committee, chairman of Watts Griffis McOuat Ltd., and a past president of the Geological Association of Canada. She was a passionate advocate for the geosciences in Canada.

The intent of the award is to encourage and support a graduate student in Canada whose thesis contributes to our knowledge about the geological history of Canada. Mapping is a significant component of the

UNESCO designation for Discovery Geopark, Newfoundland

On July 10 2020, a large area of Newfoundland's Bonavista Peninsula was declared a Global Geopark. The Geopark was recognized for its outstanding landscapes and geological significance, including

outcrops displaying well-preserved Ediacaran fossils, which can be viewed at two sites in Port Union. Encompassing 27 communities, the Geopark comprises more than 280 km of coastline with 10 developed geosites.

For more information, including maps and brochures, go to <https://discoverygeopark.com/>



The village of Trinity on the east coast of the Bonavista Peninsula

Source: tango7174, https://en.wikipedia.org/wiki/Bonavista_Peninsula#/media/File:NLE_Trinity1_tango7174.jpg. Used under Creative Commons License (CC BY-SA 4.0)

CFES National Earth Science Mentorship Medal

The CFES mentorship award was created in 2008 to recognize the sustained and inspirational mentorship of colleagues and employees including peers, graduate students, undergraduate students and technicians. The award was set up in honour of Paul F. Williams, a geologist known for scientific and mentoring excellence, candour and integrity.

Mentorship is recognized as a critical part of professional and academic development and is vital to the health of any professional community. With this award, CFES recognizes an earth scientist from Canadian industry, academia or government. The sole criterion for the award is excellence in mentoring over a sustained period of time. The 2020 medal is awarded to **Dr. Dominique Weis**.

Citation: Dr. Dominique Weis has an exceptional track record of mentoring graduate students throughout her distinguished career. Since 1990, she has mentored over 60 graduate students, including directly supervising 14 MSc and 24 PhD students (9 ongoing, 24 graduated) and 3 international interns. She has served as a committee member for 18 students and as a significant mentor for 5 others. Her passion for helping students to achieve their potential and her transformative vision for enriching student training is an absolute inspiration.

Dominique's unwavering drive for academic excellence, professionalism, and integrity define her very character and permeate all aspects of her research and interactions with colleagues and students. Dominique provides her students with a breadth and depth of geochemical training that is unmatched in the discipline. Her students have direct access to the Pacific Centre for Isotopic and Geochemical Research (PCIGR), a world-class research and training facility that she directs.

Dominique takes great care to create a truly stimulating and inspiring environment for her students, building a strong foundation from which to launch their future careers. She encourages and facilitates their participation in major international conferences, workshops, short courses, field work, and research cruises. Recently, Dominique had the exceptional foresight to establish a national training network for



Dr. Dominique Weis (L) receives the CFES (Canadian Federation of Earth Sciences) mentorship medal from CFES Past Communications Director Diane Hanano while socially-distanced during the COVID-19 pandemic.

students in geochemistry, the Multidisciplinary Applied Geochemistry Network (MAGNET), a highly successful NSERC CREATE program that ran from 2012-2018. The network offered students (at all levels, with a focus on graduate students) unique research and training opportunities via access to state-of-the-art analytical facilities, expertise, and mentorship. Dominique is now focusing on evolving MAGNET into a professional network of geochemists across Canada offering long-term networking, professional development, career support, and mentorship.

Dominique's students are widely reputed to be exceptionally trained young scientists, and they are highly sought after upon graduation. Many of Dominique's previous students pursued more advanced degrees or secured postdoctoral fellowships and professorships at respected institutions (e.g., Lawrence Livermore National Laboratory, Oregon State University, Université Libre de Bruxelles). Others have become industry professionals where they now hold senior positions (e.g., Senior Geologist, Vice President Exploration) at global mining and consulting companies (e.g., Golder Associates, Jacobs) or at funding agencies (International Affairs). In these capacities, Dominique's former students continue to make significant contributions to their fields, such as constraining the formation and evolution of Earth (and other planets), developing new geochemical tools as vectors towards buried ore deposits, and identifying anthropogenic sources of heavy metal pollution in the environment.

In summary, Dominique is an outstanding scientist, role model, and mentor. How she can invest so much time and effort in her students, while managing a large-scale research facility, directing a national training program, reviewing papers and proposals, chairing numerous committees, teaching, and somehow carrying out her own research, is nothing short of amazing. This nomination is timely, following up on the resounding success of the MAGNET program, which provided a scope of geochemical research, training, industry exposure and career development that was unique in Canada

Award remarks: On behalf of the Canadian Federation of Earth Sciences, I am pleased to present the 2020 Mentorship Medal to Professor Dominique Weis from the University of British Columbia. It is a particular

honour for me to present this to Dominique because she has been my own mentor for over 18 years. This year's medal is being presented to Dominique in recognition of her outstanding record of inspiring and empowering students and early career researchers throughout the course of her career.

Acceptance: Thank you, Diane. There is not an award that means more to me. I love interacting with students, working with them, guiding them through their thesis, but also their issues, their challenges. It's a lot of work, but it's very rewarding. I wouldn't be here without the input of my parents who were both elementary school teachers and told me how to train and care about students. Thank you, all of you, for nominating me. It means a lot.

Reading on the Rocks

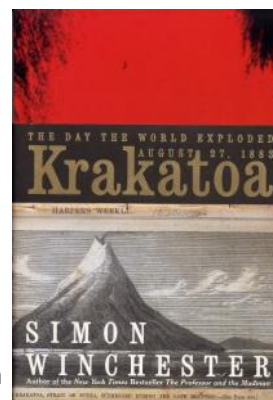
Krakatoa: The Day the World Exploded August 27, 1883, by Simon Winchester, Harper Collins, 2003, 435 pages. Hbk. ISBN 0-06-621285-5. Price ~\$33 CAD

Simon Winchester is a writer you either love or hate. I fall firmly in the former camp, even though his writing sometimes makes me cringe. Like all his books, *Krakatoa* is long, verbose, florid and at times overly flamboyant. Nevertheless, it is a compelling read. It succeeds in being wittily written and entertaining, even though the events being described are often harrowing.

Winchester starts with the setting, meditating on the modern Krakatoa as “a volcano that seems to [him] to possess a wonderfully seductive combination of qualities, being beautiful and dangerous, unpredictable and unforgettable” (p. 4). He then steps back, providing an overview of the Dutch colonial history of Java, and the island's importance in the European spice trade from the sixteenth century onwards. By the time of the eruption, Java and many of its neighbouring Indonesian islands were highly populated and well-integrated into world trade networks. The Sunda Strait, where Krakatoa is located, west (not east!) of Java, had become a major commercial seaway, a “frantically busy waterway” (p.155), linking Europe, the Americas, China, and other east Asian regions. This was the era of the telegraph

and rapid global communication. News of the eruption travelled quickly, reaching capitals around the world within a few hours.

Winchester sets up the geologic context for the volcano, explaining how plate tectonics and subduction are related to the occurrence of so many active volcanoes in the region and, with water the “crucial ingredient”, why eruptions are usually explosive and violent. Published in 2003, this account was highly prescient in view of the Sumatra-Andaman Islands Earthquake and associated Boxing Day Tsunami of 2004. The tsunami generated by the Krakatoa eruption played a major role in the disaster and its aftermath, destroying homes, communities, and infrastructure, and causing widespread death and injury. About 97% of the estimated 35,500 people killed died from the effects of the tsunami, not from the eruption itself (p. 243). The Sunda Trench subduction zone is tectonically extremely active; Java has at least 21 associated active volcanos (p. 306). It is a sobering thought: “what occurred back then will...one day repeat itself, and in precisely the same way” (p. 4).



Milestones, Memories, and Tributes

Janet Waddington 1948-2020

It is with sadness that the family of Janet Waddington (née Oxley) announces her passing on Friday, January 3, 2020 at Kensington Hospice in Toronto in her 72nd year, after a brief struggle with pancreatic cancer. Janet is survived by Dennis, her husband of 49 years; and her children, grandchildren, and siblings.

Professional palaeontologist, wife, mother, grandmother, volunteer, friend and community personality were some of Janet's many roles in a full life, and she is missed by all. She was always in her element when with colleagues, friends and loved ones and is universally remembered for her smile.

After completing her M.Sc. in Geology at the University of Toronto, Janet joined the Royal Ontario Museum's Invertebrate Palaeontology Department, retiring from there in 2012 as an Assistant Curator after over 40 years of passionate involvement in ROM's scientific, public and institutional activities. Her primary role was in collection management and began with preparing and publishing a catalogue of type specimens held in her department at the ROM. She managed six or seven successive migrations of the collections data off paper and into new computer systems, which she used to manage loans to researchers around the world.

Over the years Jan contributed to designing and building four new galleries and the Curatorial Centre at the ROM. Her most recent project was Coordinating Curator for the design and construction of the Gallery of the Age of Dinosaurs in its new Crystal home. Aspects of that process were recorded in the 90th Parallel Productions / National Film Board of Canada documentary *The Museum*.

Janet shared her knowledge and interests in papers, popular articles and public presentations for which her topics were collections, collections management, conservation and ROM history. A memorable cover story in *Rotunda* magazine described her work on



amber specimens and artifacts in the ROM collections. Part of her public outreach was helping to initiate the ROM's popular ID Clinics, where Palaeontology, Geology and Mineralogy staff regularly meet with members of the public bringing specimens they want identified.

Along the way she also filled a number of institutional roles at ROM. She became a certified Occupational Health and Safety representative and co-chaired the ROM's joint health and safety committee for many years. She was on the founding executive of ROMCA (ROM's curatorial union) and she chaired the ROM Science Curators Council for a number of years.

Post-retirement she was appointed Departmental Associate at ROM. She took advantage of this change in responsibilities to complete her study of some newly discovered Silurian marine scorpion fossils from the Eramosa Formation of the Bruce Peninsula that had come into the collections from members of the public over several years. This work was published in 2015 in *Biology Letters* as "A new mid-Silurian aquatic scorpion—one step closer to land?".

Her professional involvement was not confined within the walls of the ROM either. She was a founding

member, a past Secretary and long-time supporter of the Society for the Preservation of Natural History Collections including serving for six years as Managing Editor for *Collection Forum*, SPNHC's official, peer-reviewed journal. Janet joined GAC® in 1978 and was a member for 42 years.

Following her retirement from the ROM, she joined the board of the Canadian Fire Fighters Museum (Port Hope). Her challenges there involved coordinating the sorting through and identification of the entire collection as it had to be packed up and put into storage pending locating and moving into a new facility. This challenge was something she did not know was coming when she joined but which she approached with determination and professional dedication. Fire trucks and their history and related items are a far cry from fossil animals but she enjoyed every minute of picking up the torch from earlier volunteers to learn about them and fit the artifacts into the rudiments of a modern museum to help it re-open in future.

In retirement, Janet and Dennis spent many hours at Belliacres, their property in Port Hope where they tended 200 acres of forest. The property is a legacy of the work of her parents to recover the land from over-grazed blowing sand while Jan was growing up. It is managed as a wildlife and forest refuge, with walking

and cross-country ski trails and was always a central part of her connection to the natural world and a bit of heaven for a succession of family border collies. Just being there tending trails, trees and gardens brought Janet much pleasure. Spending so much time there, she also developed an interest in and got involved with many rural/urban community issues and municipal politics in Port Hope.

The **Janet Waddington Memorial Fund** at the ROM will create a permanent memorial, supporting collection and research initiatives as well as education and outreach programs that will enhance the invertebrate fossil collection that she helped build and so dearly cherished. The projects and activities selected for funding will reflect her passion and commitment to palaeontology and her meaningful involvement with the Museum over the past 40 years.

To donate, please go here: <https://rom.akaranis.com/Donation/Event/DonationInfo.aspx?seid=17247&mid=50> and select the Janet Waddington Memorial Fund from the drop-down fund allocation menu.

[Editor's note: Many thanks to Dennis Waddington for permission to publish this lightly edited tribute and for the image of Janet.]

Announcements



**PALAEONTOGRAPHICA
CANADIANA**

All issues of *Palaeontographica Canadiana*, except No. 25 (which is out of print), are now available through the GAC®'s online bookstore.

For a complete list and to order, please go to <https://gac.ca/product-category/palaeontographica-canadiana/>

Many thanks to Holly Steenkamp and Eleanor Penney for their work to get this online catalogue updated.



GAC - MAC London 2021 Joint Annual Meeting

*Exploring Geosciences Through Time & Space
Explorer les géosciences à travers le temps et l'espace*

For more information, please go to <https://gacmac2021.ca/>

Howard Street Robinson Fund

The Robinson Fund was established in 1977 by the Geological Association of Canada, using a bequest from the estate of Howard Street Robinson. The fund is dedicated to the furtherance of scientific study of Precambrian Geology and Metal Mining by:

- sponsoring an annual Distinguished Lecturer Tour whose focus alternates between Precambrian research and economic geology (lecturer alternately chosen by the GAC®'s Precambrian and Mineral Deposits divisions)
- supporting Special Projects including publications, symposia and conferences.

Proposals for special projects on Precambrian Geology or Metal Mining should be submitted to the Robinson Fund Committee. Projects should be sponsored or organized through the GAC® or one of its Divisions or Sections. Proposals that have a wide appeal or degree of accessibility to the GAC® membership are preferred.

For further information and proposal submissions, please contact: Dr. Stephen Piercey, Chair, Robinson Fund, c/o Department of Earth Sciences, Memorial University of Newfoundland, St. John's, NL A1B 3X5 Canada, E-mail: spiercey@mun.ca



Cape Bonavista, eastern Newfoundland

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